

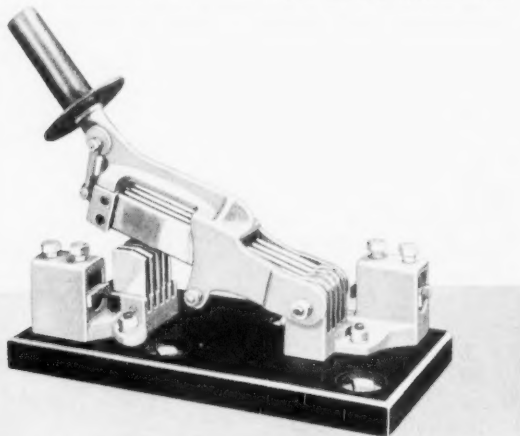
COAL MINING

"The Picture-Book of the Industry"

MARCH 1950

VOLUME XXVII, No. 3

These new Mosebach products will cut your haulage system costs



Mesco Heavy Duty Feeder Switches are designed for 750 to 1500 ampere applications. Handles equipped with "quick-break", "quick-make" springs. Available in wood or steel boxes, suitable for mounting in any position. Universal Terminals accommodate feeder cables from 250,000 to 1,000,000 CM in size.



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Mesco Shock Absorber was developed for shuttle car use. But, with adjustments, can be used on other mine machinery. Dead-ends cables and allows slack for connecting cables to junction boxes or other power sources. Protects cables . . . limits splicing operations . . . saves time. Can be securely bolted to roof or chained to timbers or rail. Recommended for use on electrical, hydraulic or clutch-driven reels.

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add to your operating profits
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Those invisible, yet costly power and profit leaks vanish when you standardize on Mosebach track and trolley equipment.

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R-100

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Kennametal—pioneers and world's largest manufacturers of cemented carbide mining tools offer you the benefit of one of the most complete collections of material assembled on the use of cemented carbide tools for cutting and drilling coal and rock. It is data recorded and reported by *Kennametal's experienced mining men*—the men who DEMONSTRATE and service Kennametal tools in the mine as well as sell them.

Material other than given above includes other folders, new methods of cutting and drilling, new applications for existing tools, reprints

and condensations of articles on cutting and drilling, reprints of talks given on cutting and drilling, and carbide tool performance in major coal seams.

This is material specializing on the cemented carbide phase of cutting and drilling. In the main, reported by our nation-wide staff of experienced mining men who handle over 30 completely different cemented carbide tools, available in over 400 different sizes. When you buy—consult a specialist, consult a Kennametal mining representative. For specialized information or service on cemented carbide cutting and drilling—write Kennametal Inc., Latrobe, Pa.

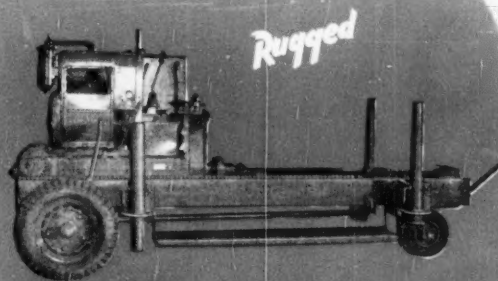
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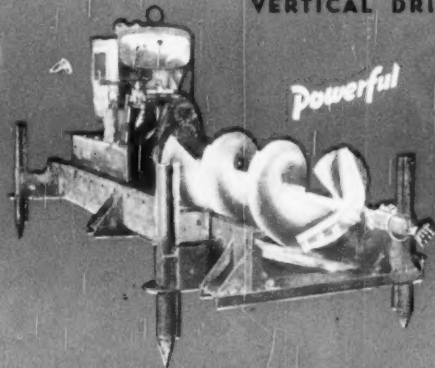
Heavy



Fast



VERTICAL DRILL



COAL RECOVERY DRILL

Top producer of them all ... McCarthy Drills

Hundreds of successful operators rely on McCarthy Drills for their really tough jobs, because they know McCarthy Drills produce more footage at less cost in less time! These rugged machines have proved themselves in every test under the most difficult conditions. List of owners furnished on request.

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Six-cylinder gasoline engine standard on all drills. Diesel or electric power units can also be supplied.

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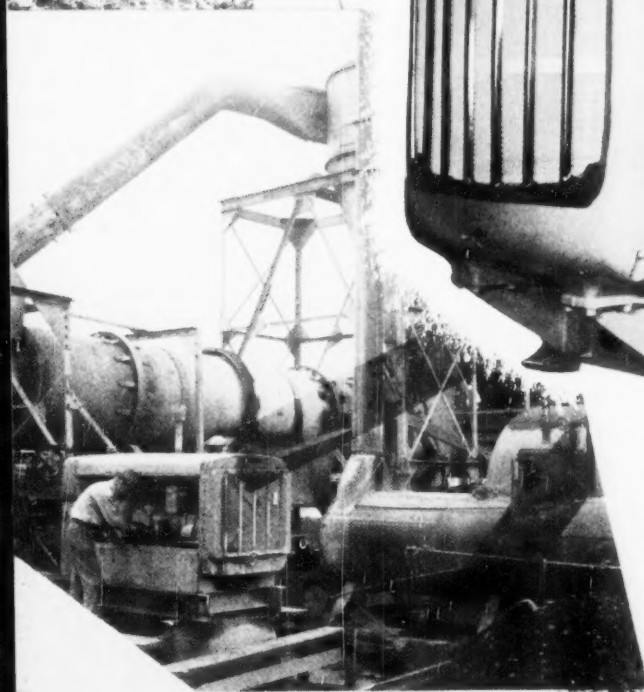
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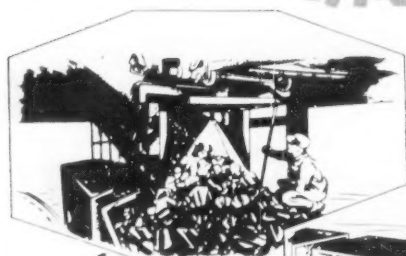
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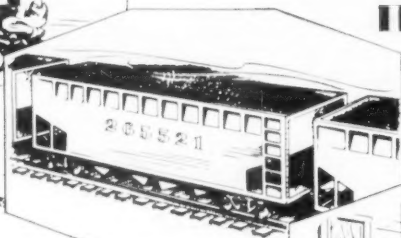
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IN TRANSIT



IN THE HOME

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ASHLAND OIL & REFINING COMPANY

Ashland, Kentucky

COAL MINING

Vol. XXVII

MARCH, 1950

No. 3

Contents

Red Jacket Coal Corporation Celebrates Unusual Safety Record	17
The Miners Hands	20
International Mine Rescue Association Meets	21
Various Makes of Stripping Equipment Used at the W. G. Moore & Son Operation	25
Penawa Coal Company Moves its Main Office	26
Safety Latch Door Leaver	27
Do You Know	28
Index to Advertisers	37

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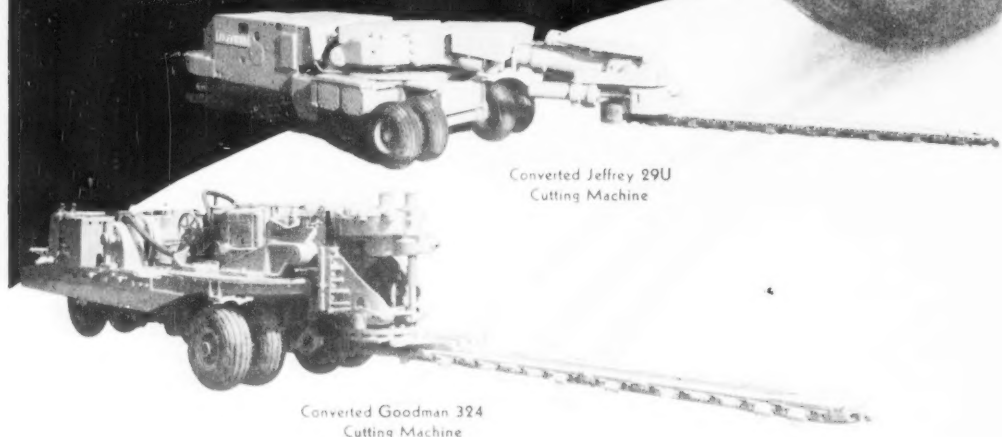
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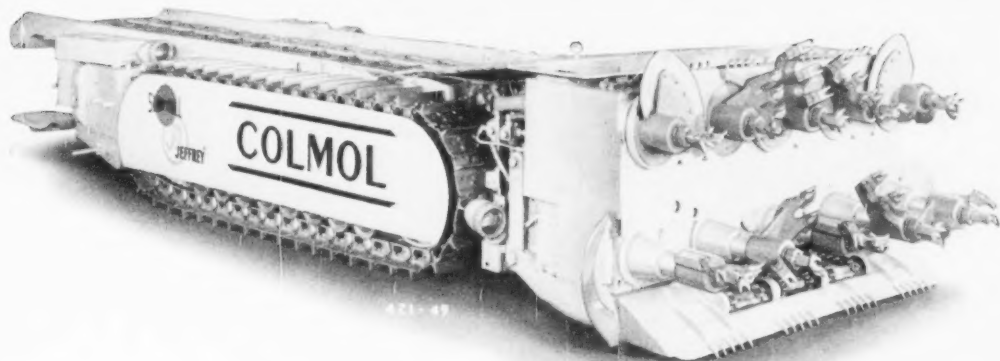
RUBBER-TIRED cutting machines and loaders provide practical, desirable features in today's picture of trackless mining and lower production costs. Rubber tires on heavy mining equipment permit faster tramming at the working face while road bed wear-and-tear is minimized. Take advantage of lower-cost trackless mining NOW — IT'S SMART... TO CONVERT!

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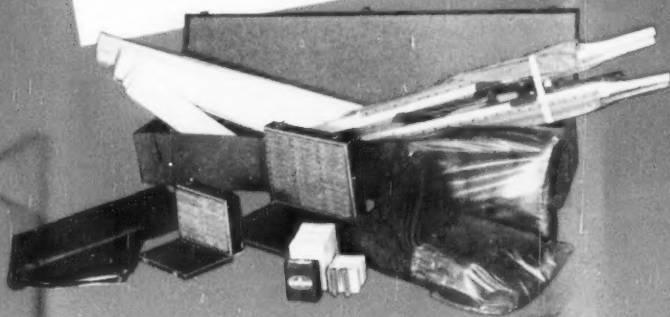
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High production is just one of the many features of the COLMOL—others (see below) will be taken up in subsequent pages.

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**FIRST AID
EQUIPMENT**

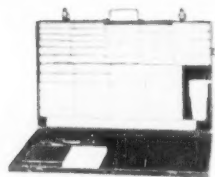
M-S-A EMERGENCY FIRST AID OUTFIT

Especially adapted for easy transportation in the mine and for storage at the working face, this equipment is a complete emergency outfit in a durable steel case. The contents include a folding stretcher which opens quickly to full-size army type, two complete first aid kits, blankets, splints, and Redi-Heat Blocks. The sturdy 20-gauge steel case is equipped with an extra heavy, tight-fitting lid and a rubber gasket which keeps contents dry and free from dust and mildew. The case is furnished with strong handles at both ends and a bracket for horizontal mounting. Overall dimensions, 36" x 12 1/2" x 8". Write for Bulletin 103.



... and for First Aid Training
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**M-S-A MINERS
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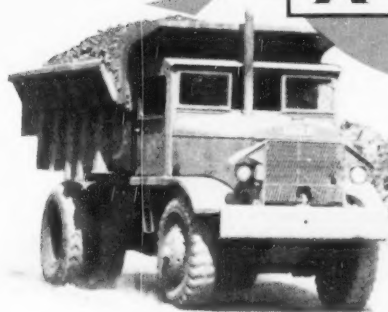
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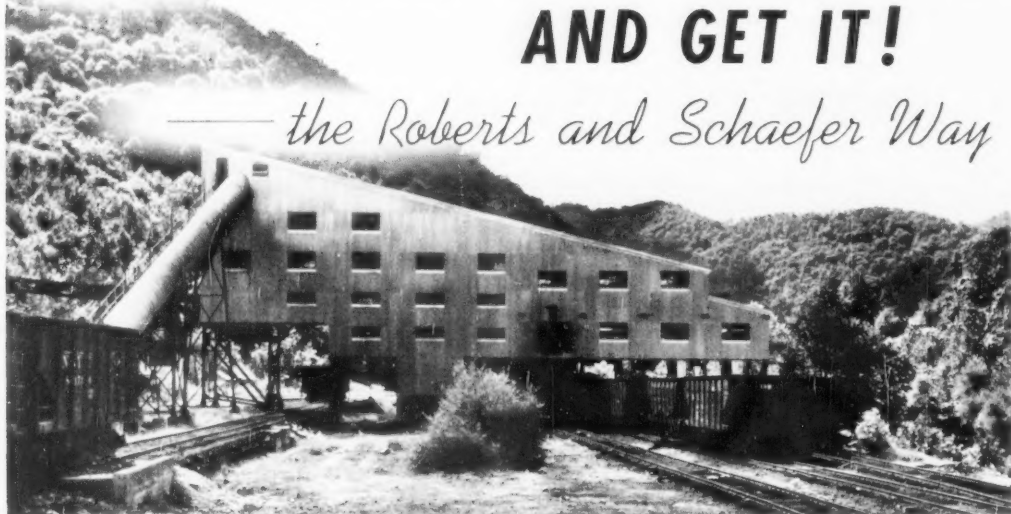
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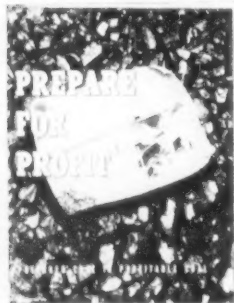
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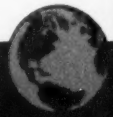
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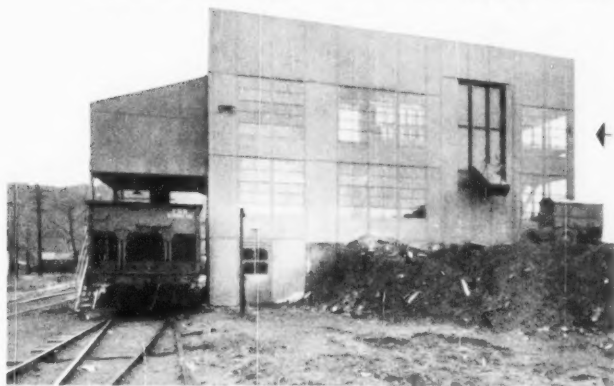
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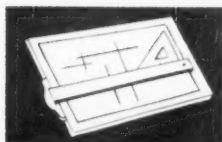
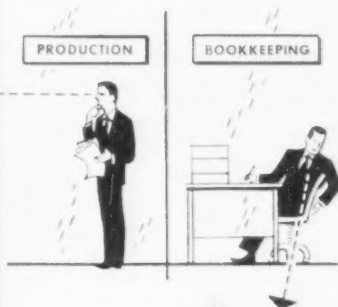
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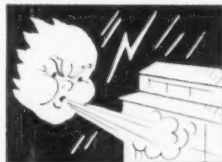


This is one job on which both your Superintendent and your Auditor will agree. Adaptability of use, flexibility of design and rapidity of erection will impress your production department, while the bookkeeping department will take notice of such outstanding features as initial low cost, durability of construction and economy of maintenance. No matter how you look at it, Steel-Bilt buildings are the perfect answer to your building problem!



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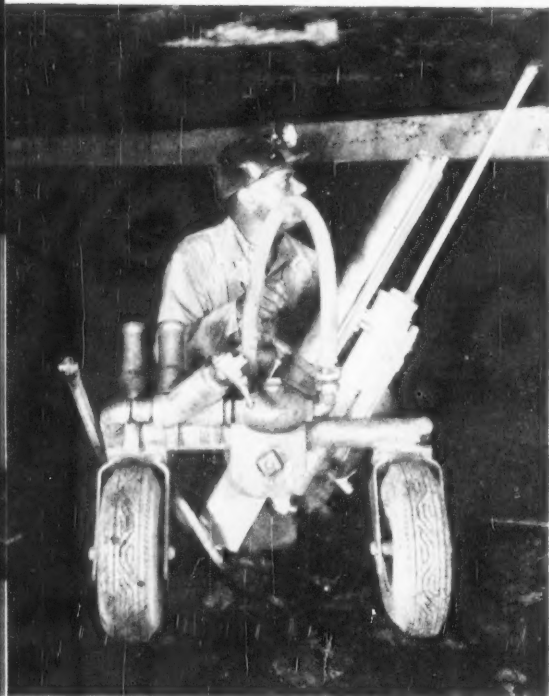
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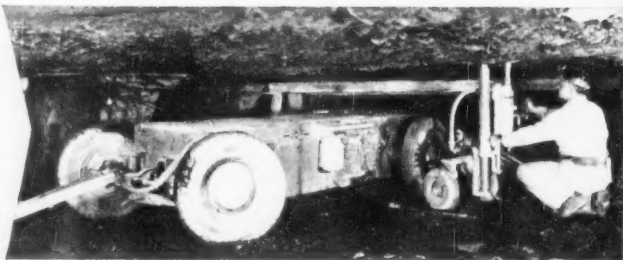
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IN CANADA: JOY MANUFACTURING COMPANY (CANADA) LIMITED, GALT, ONTARIO





Speakers' table. Left to right: J. H. Edwards; J. S. Ardico, Secretary, Williamson Coal Operator's Association; W. H. Tonlinson and Eugene Quenon of the United States Bureau of Mines; R. A. Ison, Ass't. General Manager, Red Jacket Coal Corp.; Earl Maize, Director of Safety, National Coal Association; J. J. Plasky, Training & Safety Director, Red Jacket Coal Corp.; William M. Ritter, General Manager, Red Jacket Coal

Corporation, Paul D. Ritter, President, Red Jacket Coal Corp.; A. V. Miller, U. S. Bureau of Mines; John Hansford, Director of Safety & Mine Rescue, W. Va. Department of Mines; A. F. Cook, General Superintendent, Red Jacket Coal Corp.; J. P. Hatfield, Mayor of Williamson, W. Va.; G. M. Meadows, Inspector at Large, West Virginia Department of Mines; and P. M. Farduharson, Chief Inspector, Red Jacket Coal Corp.

RED JACKET COAL CORPORATION CELEBRATES UNUSUAL SAFETY RECORD

One hundred and fourteen foremen finished the year of 1949 without a lost-time accident occurring on their sec-

tions, and of these, twenty-nine foremen have gone two years, fourteen foremen three years and four foremen four years without a single lost-time accident on their sections. A total of



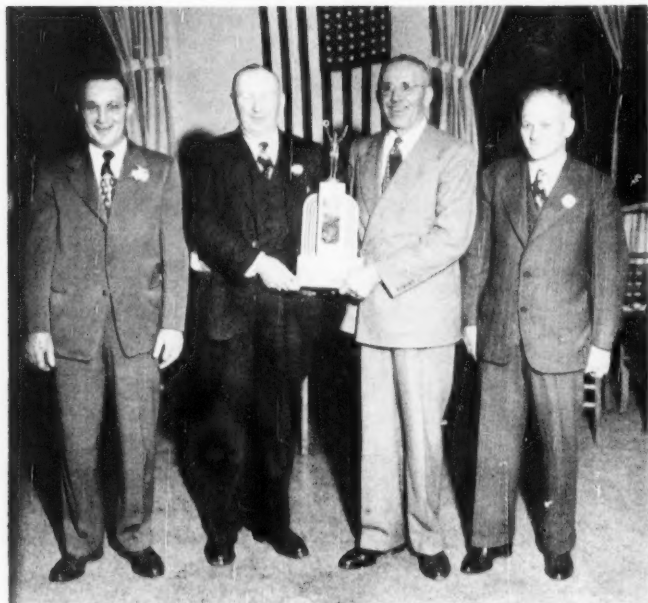
William M. Ritter, General Manager, addressing the group.



P. D. Ritter, President, addressing the group.



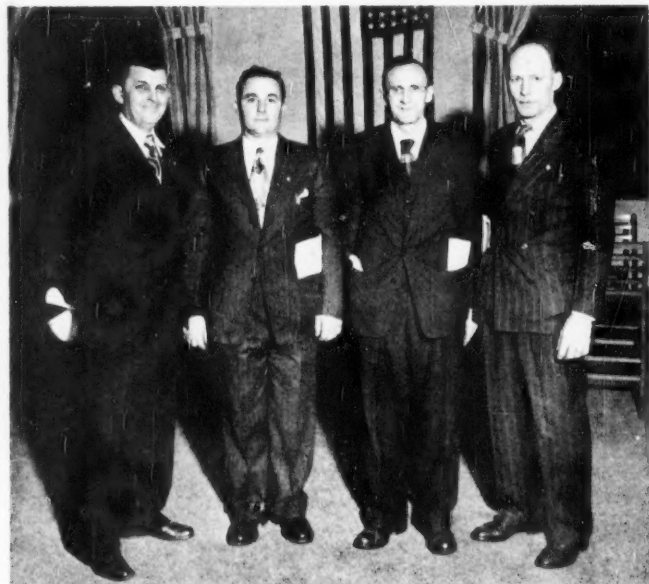
John Hansford addressing the group.



Officials of the Mitchell Branch receiving Trophy for the best safety record. Left to right: Tony Webb, General Foreman; E. S. Ferrell, Ass't. Supt.; A. F. Cook, Supt.; E. S. Burleson, General Foreman.



J. J. Plasky, Director of Safety, addressing the group.



Foremen with four year no-accident record. Left to right: S. Clark Cook, Grover Bradford, J. D. Jordan, and Haywood Dean.

930,419 tons of coal was produced at the Red Jacket mines during 1949 by crews supervised by these foremen. Man-hours exposure was 1,368,830.

The number of sections without a lost-time accident has increased steadily, and the crews and their foremen are commended on their fine showing.

Number of sections without a lost-time accident

Year	1946	1947	1948	1949
Number	22	47	79	114

Mitchell Branch was awarded the trophy for the best safety record in the Red Jacket Coal Corporation. It was a close race throughout the year. The working crews and foremen of Mitchell Branch deserve all the credit due them because they have made such a fine showing despite the disadvantage of working broken time which always increases the hazards in the mines. These men have operated Mitchell Branch without a fatality for seventeen months and only one accident from a roof fall occurred during 1949. Only two accidents from roof falls occurred at Mitchell Branch during 1948. Considering that over 50% of the accidents occurring in coal mines are caused by roof falls, the fact that only three such accidents occurred at Mitchell Branch in two years speaks well of the control of roof timbering by the workmen and foremen.



Pictures showing the presentation of certificates to the foremen who have supervised sections without a lost-time accident for one and two years.



Pictures showing Mr. Eugene Quenon, U. S. Bureau of Mines, presenting a white hat emblematic of their safety achievement to foremen who have cleared their record by means of the merit system and to foremen who have supervised sections without a lost-time accident for one, two, three and four years.



In the group receiving White Safety Hats are: Hight Hatfield, Mike Ferrell, R. S. Dean, Roy Short, Jones Kennedy, and Charles Turn.

PATENTS

Portable apparatus to make hard water soft, suitable for use in country homes where there is no water pressure system, earned a government patent this week, one of the 657 patents issued. It is a chemical softener, using zeolite, widely employed in apparatus where water pressure is available.

In the ordinary zeolite softening system, the water pressure drives the liquid through the chemical to eliminate the salts that cause the hardness. In this portable equipment gravity provides the pressure. The water to be softened is put in a container over the zeolite upright cylindrical tank, and is piped to

enter the chemical at the bottom. The soft water is drawn off from the top.

Patent 2,482,727 was awarded to Emmett J. Culligan, San Bernardino, Calif., for this invention. It has been assigned to Culligan Zeolite Company of Northbrook, Ill.

Government-assigned is patent 2,476,999, taken out by Milton Orlean of Pittsburgh, on a new method for obtaining lubricants and liquid fuels from coal. The process involves heating under pressure, in the presence of a phenolic or naphthalenic solvent.

Is your house hot, these days? Maybe dead air, trapped in attics and under-eaves spaces, is to blame. It is on this

George E. Owens has been elected President of the Imperial Coal Corporation with operations in Central, Pennsylvania. Charles A. Owen was elected Chairman of the Board of Directors, Harry B. Bartley, formerly Assistant to the President, was elected Vice President. Both George E. Owens and Harry B. Bartley will be located at 500 Fifth Avenue, New York, N. Y.

The Jefferson Coal & Coke Corporation now has its executive offices in the Mary Ann Building at Burgettstown, Pennsylvania.

James W. Haley, formerly Secretary and General Counsel for the National Coal Association, has been elected Vice President of the Jewel Ridge Coal Corporation and the Virginia Smokeless Coal Company. Mr. Haley will have his headquarters at 315-316 Southern Building, Washington, D. C.

theory that Robert Stevenson of Lynbrook, N. Y., has developed a house design that provides drainage ducts and vents within the wall spaces, to circulate air into these neglected glory-holes and equalize the temperature throughout the structure. U. S. patent 2,477,152 has just been issued to him on this idea.

A new kind of neoprene rubber which will not deform materially under the weight of vibrating machines was announced by D. R. Furman, L. R. Mayh and R. R. Radcliff of DuPont's Organic Chemicals Department. It will have particular application in mounting motors where the rubber vibration dampener is subjected to heat and oil which neoprene resists.

THE MINERS HANDS

THE MINER'S HAND

Hands in every occupation and every trade they are the most important tools—they are irreplaceable. They must be in good, healthy and efficient shape in order to guarantee efficiency to the miner.

Callosities of the Hands

The changes which the worker's hand suffers under the permanent influence of mechanical, chemical, thermal (heat and cold) irritations, are numerous. Such changes are frequently characteristic of certain occupations and are regarded as professional stigmata or signs. L. Schwartz and Tulipan, in their survey of occupational stigmata from physical and mechanical causes, mention callosities of the hands as a characteristic of miners. They are caused by friction from tools. Calluses or callosities are circumscribed patches of hard, thick skin. Actually the callosity is a form of protection of the body against harmful pressure from outside, by a tool or any hard object. The permanent pressure would injure important parts in the deeper layers of the hand; the developing callus represents actually a sort of protective dam that diminishes the strength of the pressure.

The founder of the science of industrial hygiene, the Italian physician Bernardino Ramazzini, in his important work "Diseases of Workers" (published in 1700) has mentioned already certain peculiarities of the miner's hand. However, our knowledge of occupational stigmata has to be modified every few decades, since technical progress in all occupations makes some marks disappear while other marks are being produced. A machine may have replaced manual work—or a pedal has been invented instead of the use of the fingers.

Blue-Black Tattooing

The term Blue-Black Tattooing is used by Schwartz and Tulipan to indicate the impregnation of skin with coal dust on coal miners—on the hands as well as on the upper half of the body. Deposits of coal dust and indelible blue-black scars enable the recognition of the coal miner at sight; he cannot help coloring every scratch with coal dust while he is working.

The miner's skin does not undergo chemical changes as for instance the tanners skin does or the skin of the dyer or a chemical worker—or the hair of munition workers which be-

come reddish as a result of the effect of lead ferrocyanide—but it becomes covered with smaller or larger particles of coal.

Beat Hand

The disease known as beat hand, and likewise beat knee, beat elbow etc.—are low grade conditions resembling cellulitis—an inflammation of the tissues next to the skin. The cause is in many cases the constant friction over the bony prominences of those joints, and an infection through some small injury or sodden skin. Also a bursa connected with a particular joint may be affected. A bursa is a little pocket under the skin—it occurs in various parts of the body where it is necessary to avert the results of permanent friction, mostly around the joints. They are liable to inflammation which is due mostly to undue pressure.

White Fingers

Men in the mining industry and other engineering industries have to work with high speed electricity driven tools or pneumatic tools with revolutions or vibrations up to 4,000 per minute. The miner holds the pneumatic tool in both hands, e.g. for piercing holes in mines. Quite a few publications have dealt recently with an unpleasant numbness of the fingers and the hand, called "white fingers" or "dead hand" in common language. One or more fingers blanch, feel dead and begin to ache. Sensation gets lost, the hand feels numb and becomes useless. The first sign the worker has of the disease is the unconscious dropping of a tool, of his pipe or a newspaper.

Telford and his associates in England state that the condition may persist even after the work with the vibrating tool has been given up. The best prophylactic measure is limiting to nine months any work requiring use of a high speed cutting or piercing tool. The ring finger is the most consistently and severely affected, followed closely by the American physicians are more optimistic in their opinion of both complaints and recovery than British authors. American authors stated that the condition of "white fingers" occurs only during cold weather and after exposure to cold along with the use of vibrating tools either pneumatic or electric. The conditions is caused by cramps in the

blood vessels. When the trouble is once well established during the winter, it may not disappear until the coming of warm weather. Temporary relief may be procured by massage or by hot water baths. When once "white fingers" have been established, they have a tendency to recur; this may even happen after the use of vibrating tools has been given up.

The condition is closely connected with the method of working. The tool is rarely mounted on a support. More often the worker is obliged to hold it in both hands, according to L. Teleky, thus receiving directly the shock of the rapid and intense vibrations. When he applies it in an upward direction, the miner is obliged to support the whole weight of the tool. In certain other cases the tool rests on the shoulder, in the elbow bend or against the thigh.

Infection of the Hand

Industrial statistics have shown that infections of the hand form the major injuries which lead to partial and permanent disabilities. The miner is exposed to small injuries which may become infected. As Sumner L. Koch resumes it: "The trivial hand injury, promptly and accurately cared for, goes on to rapid recovery; neglected it may result in serious infection."

Injuries of the hand form the most common type of industrial accidents, but serious infections of the hand are rare when there is proper medical care immediately after the injury. Good first aid treatment consists in immediate application of a sterile dressing and nothing more. Siler stresses the fact that obviously the best treatment of injuries is prevention of further harm—and this is only attainable as the result of permanent cooperation and the sharing of responsibility by the employer, the employee and the doctor.

Furuncles and Pustules

Most pustules on miners' hands are not of dangerous infectious origin, but are simple furuncles or boils. As far back as 1862 a study on special signs of workers' hands was published by Vernois in Paris, and it mentions already the frequency of furuncles, pustules, eczemas, etc., among miners. The inflammation frequently takes its start from a se-

(Continued on page 29)



Above: (1) W. L. Affelder was Master of Ceremonies at the Banquet. (2) Jim Hamilton, Vice President in Charge of Operations, Island Creek Coal Company, was retiring President of the Institute. (3) W. L. Coulter,

the incoming President of the Institute for the ensuing year. (4) Charles E. Lawell, Vice President, Mining Division, C & O Railroad Company, was Principal Speaker of the evening.

INTERNATIONAL MINE RESCUE ASSN.

The Twenty-fifth annual Meeting of the National Mine Rescue Association was held in the Wm. Penn Hotel, Pittsburgh, Pennsylvania, on the evening of December 14.

This Association was organized in 1924 with W. G. Duncan as its President, F. B. Dunbar as Vice President and C. O. Roberts as Secretary-Treasurer. Officers in 1949 were President A. J. Frazier, Vice President E. A. Siemon, and Secretary-Treasurer J. H. Zorn.

Following a First Aid Contest on a very warm June day in 1924, in Fayette County, Wm. G. Duncan invited C. O. Roberts, George S. McCua, J. E. Struble, J. V. Berry, George W. Riggs and George H. Deike to come to his home to participate in refreshments.

They were assembled on Bill's front porch when the discussion of Mine Explosions and Fires was raised, and which were occurring all too frequently. After some discussion this group decided to contact their friends who were interested in and had participated in Mine Rescue and Recovery work for the purpose of forming an organization in which they could discuss the causes of explosions and fires hoping this would be a method of reducing the occurrence of disasters in the mining industry.

On September 6, 1924, a group of men met in the H. C. Frack Building at Leisensing, Pennsylvania, for the purpose of forming an organization. The plans and purpose of the organization were formulated at this meeting and it was decided to hold a meeting in Pittsburgh on December 2, 1924, to complete

the Constitution and By-Laws of the organization. All persons who attended either of the first two meetings would be charter members. The list follows:

*J. V. Berry	Joseph L. Maize
*H. H. Burdelsky	*George S. McCua
E. V. Barrett	J. C. McDermott
S. J. Chuminsky	George C. Neime
Philip Canabhan	*William Nisbet
J. C. Davies	Charles Opperman
*F. B. Dunbar	Frank Fardoe
*George H. Deike, Sr.	*D. J. Parker
*Wm. G. Duncan	*J. T. Ryan
S. S. Hall	*George W. Riggs
P. S. King	*J. J. Rudledge
W. J. Fene	R. B. Reid
*C. L. Lutton	C. O. Roberts
*Richard Maize	W. F. Sullivan
*B. J. Murphy	*V. A. Stanton
M. J. Murphy	*Edward Struble
*H. O. Millward	*J. E. Struble
K. L. Marshall	James Thurgie
Wm. Moore	James D. Walker
*H. E. Mason	*J. H. Zorn

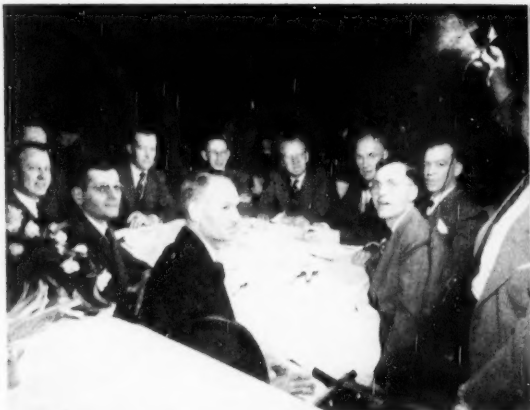
Fast Presidents

It was decided at this meeting that the organization be known as the SMOKE EATERS ASSOCIATION. It was several years later the organization discovered that this name was a char-



Above, left to right, (1) Ed Siemon, Division Superintendent, Hillman Coal & Coke Company, and J. V. Berry, Director of Safety for the Bethlehem Collieries Co., at the speakers table. (2) H. R. Burdelsky, Chairman of the Auditing Committee, and J. H. Zorn, Secretary and Treasurer, discussing the finances of the Association. (3) Dan Walker, U. S. Bureau of Mines,

Pittsburgh, presenting the principal paper of the evening. (4) C. Fremont Davis, Safety Director, International Office, United Mine Workers of America, presenting a paper on mine safety. (5) Frank Dunbar, retired, led the guests in song before dinner. Seated is Maurice Cooper of the National Coal Association.



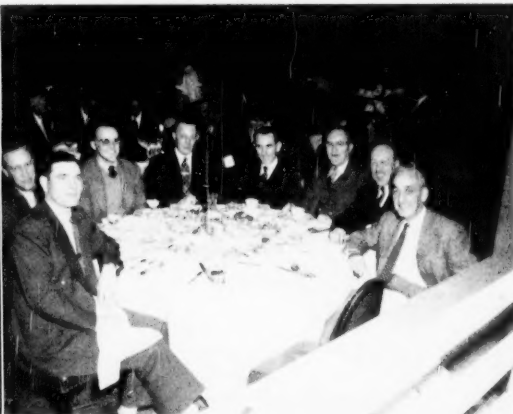
At this table are seated: George Savanick, Frank B. Comack, Frank O'Brochton, George Cormack, Jr., Anthony Morascini, W. E. Hart, T. P. Latta, Thomas Mark, Earl E. Stoiting, and Robert Whalen, all of the Crucible Fuel Company, Crucible, Pa.



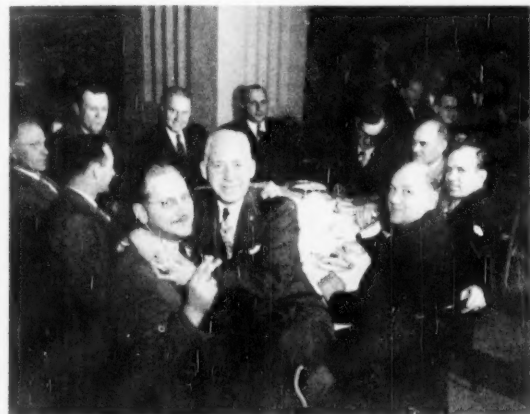
At this table are seated: Charles Zotter, C. W. Hamilton, Ralph Arbuthnot, David Ewing, Jr., Leo Sobol, C. Fred Loucks, all of the Wildwood Mine, Butler Consolidation Coal Company, and Tony Pawlosky, of the Pittsburgh Coal Company.



Seated at this table are: Lloyd Gardner, John Baniecki, James Bortowski, Harry R. Welling, H. C. Hoy, Pete Shmal, Pete Fowler, and William Calahan, all of Mather Collieries, Mather, Pa.



Seated at this table are: Isaac Rumble, George Stady, J. H. Truax, of the Duquesne Light Company, L. H. Hoffman, Consumers Mining Company, and R. O. Joseph, W. H. Sulminger, W. C. Willer, and D. H. Tingley, of the Johnstown Coal & Coke Co.



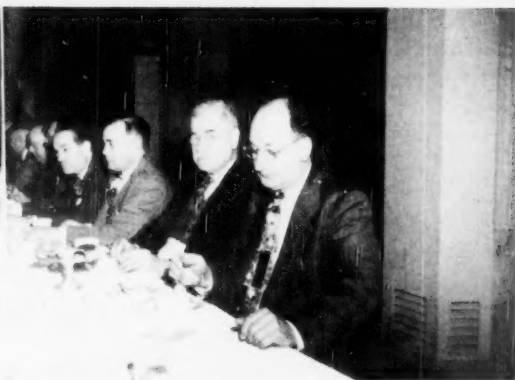
F. C. Anderson, Electrical Engineer, H. C. Frick Coke Co., sitting on lap of T. E. Foster, Representative, Frank Prox Company. The rest of the men at the table are officials of the Robena Mine of the H. C. Frick Coke Company.



C. E. Wilkie, Superintendent, Republic Steel Company, J. R. Walthour, State Mine Inspector, L. O. Lougee, Mining Engineer, and C. C. Cornelius, both of the George S. Baton Company; G. M. Krese, Republic Steel Co.



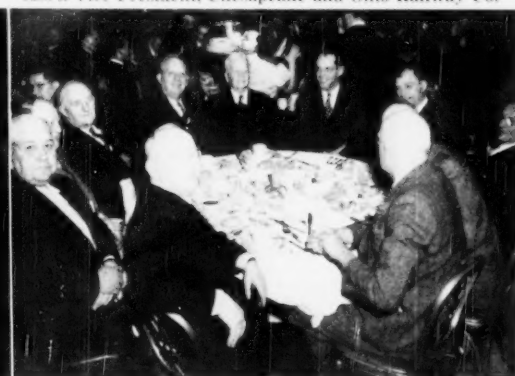
Left side, left to right, J. T. Ryan, Jr., Exec. Vice President, Mine Safety Appliances Co., H. P. Greenwald, Director, Northeastern Region, U. S. Bureau of Mines, Frank T. Powers, Director, Maryland Bureau of Mines, W. Garfield, Thomas, Deputy Secretary of Mines, Bituminous Division, G. A. Shoemaker, President, Pittsburgh Coal Company.



Right side, right to left, J. M. Lowe, Cost Accountant, Hillman Coal & Coke Company, Dr. J. J. Rutledge, Chief Consultant, Maryland Bureau of Mines, Dennis J. Keenan, Mine Inspector, U. S. Bureau of Mines, M. L. Coulter, Ass't. to Vice President, Clearfield Coal Corp., J. L. Hamilton, Vice President, Island Creek Coal Company, William L. Affelder, Exec. Vice-President, Hillman Coal & Coke Company, and Prof. Charles E. Lawall, Ass't. Vice President, Chesapeake and Ohio Railway Co.



Robert D. Rennie, Master Mechanic, Robena Mine, C. W. Pisula, Assistant Master Mechanic, H. C. Frick Coke Company, R. Lechorrick, T. W. McCrackin, Engineer, H. C. Frick Coke Company, W. B. Beerbower, Superintendent, Maxwell Mine, H. C. Frick Coke Co., Oran Hartzell, Night Foreman, Maxwell Mine, H. C. Frick Coke Co.



Seated at this table are: William P. Powers, State Mine Inspector, J. D. Whalen, Foreman, Francis Strip Operation, George S. Baton Company, P. G. Callaghan, C. B. Miner, Robert Jordan, George S. Baton, C. B. Baton, William J. Maize, George W. Witherspoon, and R. E. Shaw.



Left to right: Tom Markland, Superintendent, Allegheny Coal & Coke Company, D. A. Schwanke, District Manager, and W. S. Emmons, Assistant to Vice President, Hulbert Oil & Grease Co.



Ed Mason, Superintendent, Bridgeport Mine, H. C. Frick Coke Company, entertaining guests with a song.



Overall view of a pit in the "A" seam at the W. A. Moore & Son mine.



Shooting the "A" seam coal at the W. A. Moore & Son strip mine.
P & H 1005 dragline stripping overburden.



Osgood Model 1006 Shovel moving overburden off the "A" seam



A C, H-D 19 Tractor leveling spoil off the "A" seam

Various Makes of Stripping Equipment Used At the W. G. Moore & Son Operation

Operating on a 3000 acre tract of coal bearing land, lying south of Houtzdale, in Clearfield County, Pennsylvania, W. G. Moore & Son is using a variety of equipment to move overburden lying on the A, B, and C seams of coal.

The "A" seam averaging $3\frac{1}{2}$ to 4 feet thick, being the lowest stripable coal bed on the property, is present in the entire 3000 acre tract. The "B" seam, averaging 34" thick, is present in about 1000 acres and the "C" seam, averaging 34" thick, is found in only about 250 acres.

The "A" seam lies on an average of 53 feet below the "B" coal, and the "B" coal lies on an average of 38 feet below the "C" coal. The stripping limit on the "C" coal runs about 35 feet.

The stripping equipment consists of a 1006 Osgood shovel, having 45 foot boom and 35 foot stick; a 1201 Lima (air-controlled) having a 43 foot boom and 32 foot stick, equipped with ESCO bucket; a 1055 P&H dragline, having 90 foot boom and $4\frac{1}{2}$ yard ESCO bucket.



The 10 wheel truck, which is powered by a 371 GMC Diesel engine.

The coal is loaded with an 802 Lima shovel, equipped with a 2 yard ESCO coal loading bucket, and a Lorain 80 shovel, also having a 2 yard ESCO coal

loading bucket. Six tractors, two of which are H-D 19 tractors and two H-D 14 tractors, all four equipped with bulldozer blades. Two H-D 14 tractors are used to pull two Gar Wood scrapers in moving overburden in the summertime.

The output is hauled in five privately operated trucks. One of these trucks is powered by a 371 GMC Diesel engine and has 10 wheels. In the coal tipple, it is hand picked before it passes through a 48 x 30 McLanahan crusher. An 8 x 6 double deck shaking screen sizes the coal. Another 24 x 8 double roll, secondary crusher at the end of the shaking screen makes smaller sizes when they are in demand.



Lima Model 802 shovel loading out "C" seam coal.

Penowa Coal Company Moves Its Main Office

The Penowa Coal Co., the largest independent mining firm in the tri-state area, is now operating all general and sales offices from the center of the concern's mining activities at Burgettstown, Pa.

Penowa president Leonard P. Sasso announced the move from downtown Pittsburgh offices in the Grant Building "in the interests of efficiency of operation." This is believed to be the first move by such a large concern from the "Workshop of the World" to a small town near the center of operations.

More than 600 suppliers, and Burgettstown businessmen and residents turned up at the open house last month

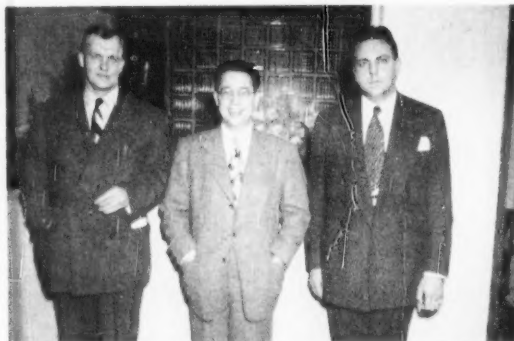


Leonard Sasso, President, Penowa Coal Company.

in the beautiful new offices of the firm on the second floor of the Mary Ann Building on Main Street.

Penowa vice-president and general manager John E. Anderson said he will be able to supervise the firm's 600 miners and office workers in Allegheny and Washington Counties in Pennsylvania and Brooke and Pleasants Counties in West Virginia in a more efficient manner from the new quarters.

Anderson added that he and President Sasso had been considering the move for about four years. After exhaustive geographical and business surveys, they decided upon Burgettstown.



J. E. Anderson, Executive Vice President, R. C. McKelvey, Secretary, and J. W. Long, Ass't. Sales Manager.



J. W. Long, Superintendent, Deep Mine, and Thomas McCaffrey, Superintendent, Strip Operations.



J. Cass, Inside Superintendent of Deep Mine and Lewis Cieslak, deep mine foreman.



R. D. Sheehan, President, and James W. Krater, Ass't. Secretary of the Motive Parts Company, and W. M. Thomas, Sales Manager, Penowa Coal Company.



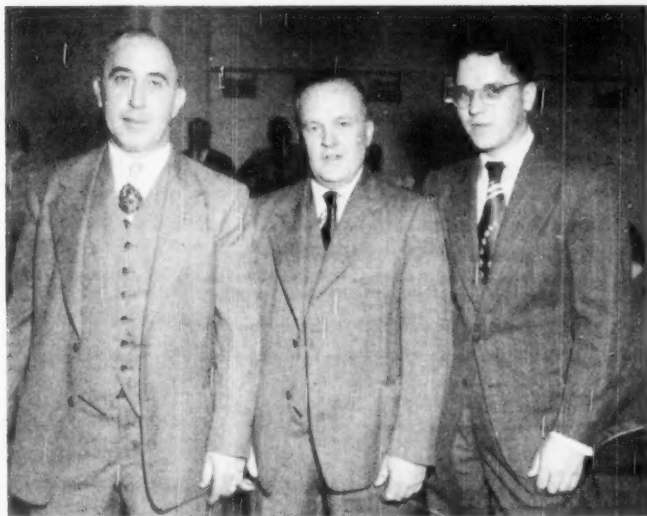
town. Donald and Anthony Mungello, owners of the Mary Ann Building, designed and built the extra floor to their building according to Penowa specifications.

The 3200 square feet of floor space is laid out to permit a maximum of use. The latest in fluorescent lighting is used throughout the office. A 24-telephone switchboard has under-the-floor connections to every desk. Secretary and Controller R. C. McKelvey has a special glassed-in office which permits him to supervise office operations and talk on the long-distance telephone without interference from outside conversation.

The firm's new vice-president, Paul C. Major has a special office along next to a private sanctum for General Manager Anderson. President Sasso will maintain executive and personal offices in the Grant Building, Pittsburgh.

The new location is only 28 miles from Pittsburgh and Mt. Lebanon where executives of the firm live. It is only eight miles from the Brooke County (W. Va.) Deep Mine No. One, largest company operation at present. Main repair and maintenance shops and the field engineering offices will remain at Eldersville, eight miles away. The repair depot and two of the company's tipples are on the same local telephone exchange.

Mr. Sasso believes that the salesman will be able to offer even better delivery schedules to customers. Even from the Pittsburgh offices, most of the coal deals were closed by long distance telephone. Now, he figures the salesman will be able to quote more accurate loading and shipping times to customers because of the hourly checks on production which will be maintained in the main office.



John Ranegar, Master Mechanic; Alex Motte, Assistant Foreman; and Jack Leber, Engineer, Penowa Coal Co.

DO YOU KNOW?

Insulating tape, for electrical application by vulcanizing, is made of glass fiber impregnated with a rubber-like dielectric on both sides. On one side of the tape, the rubber is completely cured but on the other is semi-cured only. When heat is applied the total becomes a solid mass.

A nylon-derivative film makes a new plastic wound dressing which gives an infection-free, dirt-free bandage. It is bacteria-proof and keeps a wound dry in spite of body perspiration.

Roof rafter lengths and cuts are calculated quickly and accurately with a pocket-size flat plastic tool containing two dials which, when properly rotated and set, give the desired information. The instrument makes it possible to design a roof with any pitch from 14 to 57 degrees.



The Fire Safety Latch attached to a side of the concrete block sub station housing.

FIRE SAFETY DOOR LATCH LEVER

In order to protect this rectifier which is housed in a concrete block building in its mine, the Crucible Fuel Company at Crucible, Pa., has devised a latch that automatically closes the door to the building in case of a fire. The accompanying picture and diagrams show how the latch is constructed and how it works.



Do You Know

A revolver incorporating the first really radical change in design since the weapon was first invented by Samuel Colt more than a century ago has just been patented here by Louis H. Palma of Nashville, Tenn.

In Colt's original revolver the rear-most part was the grip or butt, with the frame containing the cylinder in the middle and the barrel at the forward end. This pattern is preserved in today's revolvers.

In Mr. Palma's new revolver, for which he received patent 2,465,815 the cylinder has been moved to the rear, with the grip and trigger-guard under-

neath and in the center position, while the barrel extends over the top from cylinder to muzzle. The trigger activates a cam, which simultaneously revolves the cylinder and serves as a sear to rock and then trip the hammer, concealed in a cap behind the cylinder, by means of the rod or pin on which the cylinder turns.

Several advantages are claimed for the new arrangement. The considerably increased length of the barrel makes for greater accuracy of fire, as well as for higher velocity on a given type of ammunition. Reloading and cleaning are easier because the whole rear of the

cylinder is left clear by swinging away the rear cap. Finally, the weight of the weapon is centered directly over the grip, making for greater steadiness in aiming and firing.

There remains the possibility of scorching the user's hand through sideflash in the clearance between cylinder and barrel. This, however, is neatly obviated by means of a guard that extends under the cylinder rearwardly from the grip.

* * *

A unique mechanical spring that becomes easier to deform as a load is continued to be applied has been developed here by W. J. Cook, of the Hunter Spring Company, and many applications for its use in the mechanical world are promised.

The secret of the new spring, Mr. Cook states, lies in prestressing each successive increment of length of a flat strip by a predetermined, but not necessarily constant, amount. In its relaxed position the device forms into a tight coil, each turn pressing on the others. In use, this new type of spring is progressively unwound, or drawn out like a tape rule, over its range of action. Its resisting force is developed as each successive length of the metal strip is drawn off the coil, and is strengthened thereby. The force required to do this varies inversely as the radius to which the metal strip has been prestressed at that point.

Obviously, he continued, if the negotiator is heavily prestressed near the free end and only lightly prestressed farther along the coiled length, the device will pull back more at the beginning of its range of action than at the end of the action.

Among applications in which the device may be found valuable, are in fasteners, delicate instruments, hose wrapping, extension or compression springs, automatic coiling devices, a friction band, a telescopic tube form, and many others. It has a wide range of action, up to 50 times any original dimension, and can act around corners and through small openings with the same freedom as non-elastic bands or cables. This new spring gives promise of greatly influencing the future of mechanical design.

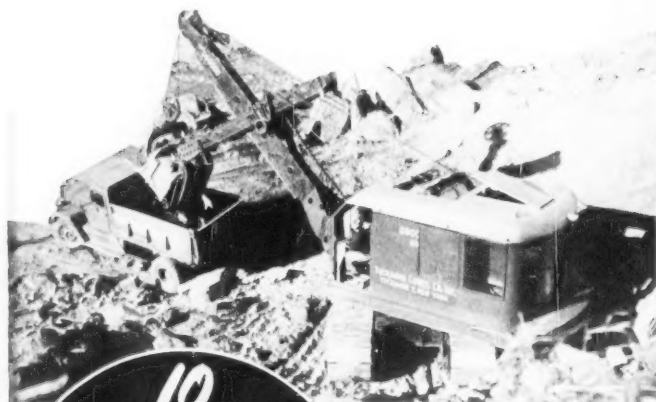
* * *

Luminous ceilings, made of plastic through which glareless light comes, may be the lighting system of the future.

Mounting many lamps behind a translucent plastic is the most completely adequate way of lighting a room, a special committee on lighting at Massachusetts Institute of Technology reported recently.

Luminous ceilings are made by hanging fluorescent lamps from a ceiling that has been painted white. About a foot below the lights, covering the whole ceiling, is a thin sheet of plastic that allows the light to gleam through.

Another suggested way of achieving the same lighting effect is to use special overhead light fixtures. These are two half-cylinders, an upper one of translucent plastic and a lower one of diffusing plastic. When looking up at a ceiling thus lighted, both the lamps and the ceiling itself appear to have the same brightness.

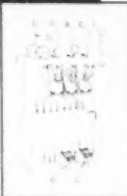


10 REASONS WHY OPERATORS PREFER THE OSGOOD AIR CUSHION CLUTCH with AIR CONTROL

Nerve Center of OSGOOD Air Control

- A—Activates swing and traveling motions, also swing brake.
- B—Controls crowd and retract motions.
- C—Governs hoisting drum.
- D, E—Operate steering clutches and brakes, each tread is independently controlled.
- F—Activates easy, positive dipper trip.
- G, H—Operates brakes on hoist drums.

Control levers are equipped with air-actuating valves for smoother, more accurate control.



- 1. Smoother operation, no jerking, no grabbing.
- 2. Instant, accurate control of swing, hoist and travel.
- 3. Easy to operate. Simple, centralized control bank.
- 4. Sensitive control, operator retains "feel" of load.
- 5. No adjustments, automatic compensation for clutch lining wear.
- 6. Unaffected by temperature changes.
- 7. No burning up of clutch; air-cooled.
- 8. Speeds production; greater output with less effort.
- 9. Freedom from frequent repairs and maintenance.
- 10. Less wear and tear on both operator and machine.

OSGOOD Air Control with Air-Cushion Clutch is only one of the many reasons why OSGOOD Power Shovels outperform any others on the market. For your own good—check with General and Osgood. Write today for complete information.

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DIESEL GASOLINE OR ELECTRIC POWERED • 1 TO 24 CU YD. • CRAWLERS & MOBILCRANES

Here And There

The Hazard Coal Operators Association held its Annual Meeting in Lexington, Kentucky, Thursday, November 17.

George P. Fitz, President and General Manager, Ajax Coal Company, who has been President of the Association for a number of years, was again reelected. L. A. Hopper was reelected Secretary and Treasurer, and the members of the Board were also reelected. At the banquet James W. Haley, Secretary and General Counsel of the National Coal Association, spoke.

R. C. Scott, General Manager, Cornett-Lewis Coal Company, Louellen, Kentucky, was elected President of the Harlan County Coal Operator Association at the 33rd Annual Meeting of the Association held in Harlan Wednesday, November 16. M. M. Ellison, General Manager, Southern Harlan Coal Company, Lenae, Kentucky, was elected Vice President, and George S. Ward was reelected Secretary. Members of the Executive Board elected are: Pearl Bassham, President, Harlan Wallins Coal Corporation; C. V. Bennett, President, V. & C. Coal Company; Kenes Bowling, President, Bardo Coal Mining Co.; R. W. Creech, Jr., Manager, Creech Coal Co.; C. S. Guthrie, Manager, Harlan Fuel Co.; S. J. Dickenson, Secretary-Treasurer, Mary Helen Coal Corp.; F. L. Dupree, President, Clover Darby Coal Co.; J. S. Greene, President, Garmada Coal Co.; Elmer D. Hall, President, Three Point Coal Corp.; L. P. Johnson, Manager, Crummies Creek Coal Co.; and J. E. Taylor, Manager, High Splint Coal Co.

The Court of Appeal for the State of Maryland held null and void the Maryland Strip Mining Act passed by the legislature of that State in 1947. This act required a filing fee, bond in discretionary amount and for refilling in accordance with rules and regulations of the State Bureau of Mines, etc.

Coal is produced in Garrett and Allegany Counties in Maryland and the act also provided for an exemption for strip mines in Garrett County. In the decision the Court affirmatively dealt with all of the features of the act, but declared it null and void on the ground of discrimination since the law had effect in Allegany County but no effect on mines of similar size, mining under similar conditions, and produc-

ing a similar product, in Garrett County. The case was presented on appeal from a decision of the lower court upholding the statute.

(Cont. from page 20)

baceous gland or from a sweat gland or the shaft of a hair. It is usually due to inoculation with a germ. The infections occur mainly on parts of the skin that are exposed to friction or injury. The furuncle may become very painful.

In some days or a week the boil is "ripe." The pustule ruptures, and its yellowish-white content is extruded or may be removed mechanically. The general condition of a miner may predispose to the infection, and unhygienic working conditions surely have influence on its growth. In all cases of boils and especially in extended general furunculosis it is necessary to test the urine for sugar, as a diabetic condition favors the predisposition to furuncles. However, even a diabetic miner, with the help of insulin, regains his full working efficiency.

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with the



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MINE LOCOMOTIVE HEADLIGHT
YOU WANT FAST HAULAGE
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The SCHROEDER BROTHERS HA-1 Cast Steel Headlight is designed to withstand the constant shock of Mine use. Steel Clad Resistor units have been carefully engineered for varying voltages, to insure long Bulb Life.

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NEW EQUIPMENT

• MARION POWER SHOVEL COMPANY



Marion 7800, largest type walking dragline in the world, strips overburden exceeding 85 ft. for The Powhatan Mining Company near Bloomingdale in Jefferson County, Ohio. The 1,400-ton machine, equipped with a 30 cubic yard bucket and 200 ft. boom, lays bare a 4½ ft. seam of Pittsburgh No. 8 coal.

Delivery of the Marion 7800 was accomplished late in the summer of 1948 by heavy-duty truck outfits. More than 80 truckloads were required to ship the machine's many component parts over the 160-odd-mile distance from the Marion Power Shovel Company plant in Marion, Ohio, to the erection point on the Powhatan property. The 200 ft. boom itself made up seven large truckloads.

• CUMMINS ENGINE COMPANY, INC.

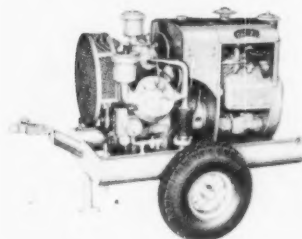


This Model 392 Marion shovel is presently engaged in stripping overburden at the new mine being worked by the O'Penn Mining Company near Winburne, Pa. The shovel was recently repowered with a supercharged Model NHIS-600 Cummins Diesel. Activity on this new operation has so far largely been confined to stripping work. Actual excavation of coal is not yet underway on a large scale.

• DAVEY COMPRESSOR COMPANY

A new 60 c.f.m. compressor which is reputed to be lighter in weight, more economical in operation and lower in cost than conventional machines, is announced by the Davey Compressor Co., Kent, Ohio.

Known as the Davey Super Chief, Model 60-WBD, the new unit is of the



3-cylinder air-cooled type. It employs stainless steel discs Permanent Peak Efficiency Valves identical to those used in the standard Davey Air Chief line.

Other compressor features include an automatic centrifugal clutch which engages at 700 r.p.m. This disengages the compressor when engine is cranked and facilitates easy starting.

The unit has full force-feed lubrication throughout by means of gear-driven pumps on both engine and compressor. Replaceable-element type air and oil filters are employed. A built-in unloader system automatically maintains any predetermined air pressure up to 100 lbs. The compressor's 6-inch in diameter tubular steel frame serves as a 2500 cu. in. capacity air receiver. The manufacturer states that the unit will operate efficiently in a temperature range of -45° F. to +105° F.

It is claimed that the Super Chief, with its tubular steel safety tow bar and 6.00-9 balloon tires can be towed behind a passenger car or truck at speeds up to 50 m.p.h. The unit exhibited at the recent A.E.D. meeting was towed from Davey's Kent, Ohio, plant to Chicago, a distance of 412 miles in 7½ hours. Tires showed no wear and the compressor was placed in operation immediately upon arrival.

Because of its light weight the unit can be easily pulled from place to place by hand. This makes it an especially important tool for light contracting, railway maintenance of way, plumbing and cemetery work, or for use on jobs where maximum portability is essential. It is particularly well adapted for the use of home builders who employ air in the operation of saws, nail drivers and augers.

A few of many other typical applications are spray painting, sand blasting, rock drilling, pavement breaking, etc.

The Super Chief is powered by a Model VP-4, 4 cylinder air-cooled Wisconsin Engine. It is 72 inches long, 48 inches wide and 52 inches high. Net weight is 1250 lbs.

• MINE SAFETY APPLIANCES COMPANY

M.S.A. FLASH-O-GRAPH PROVIDES FLASHING MOTION FOR SAFETY MESSAGES

Safety messages which gain and hold attention by a combination of light and motion are made possible by the new M.S.A. Flash-O-Graph, a product of Mine Safety Appliances Company, Pittsburgh, Pennsylvania.

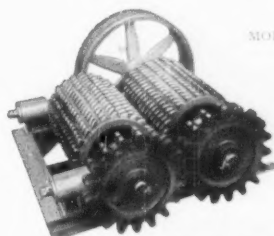
Messages on an M.S.A. Flash-O-Graph are spelled out in bright dots of light which move along continuously like electric news bulletins. The Flash-O-Graph is a powerful aid to safety in plants and offices, is economical, dependable, and

easy to maintain, says the manufacturer.

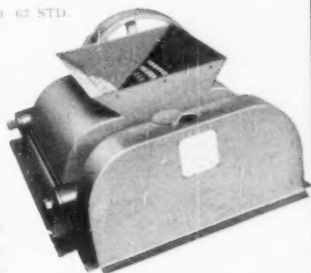
The M.S.A. Flash-O-Graph is cased in steel with a black crackle finish. It measures 23"x17"x6" and weighs 6½ lbs. complete. The flashing action is provided by a replaceable, endless, perforated tape which is illuminated by a fluorescent lamp. The tape passes continuously behind a glass window through which the message is projected. Fifty-two standard tape messages are available and special messages can be furnished on request.

A bulletin describing the new M.S.A. Flash-O-Graph is available on request from Mine Safety Appliances Company, Braddock, Thomas and Meade Streets, Pittsburgh 8, Pennsylvania.

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MODEL NO. 62 STD.



SCOTTDALÉ double-roll COAL CRUSHERS

Uniform coal products at a saving in power consumption . . . an actual fact with the Scottdale double-roll Coal Crusher that features an efficient shredding action on the coal by means of toothed double-rolls assembled in a staggered position.

The Features . . .

- FORGED STEEL TOOTH GEARS
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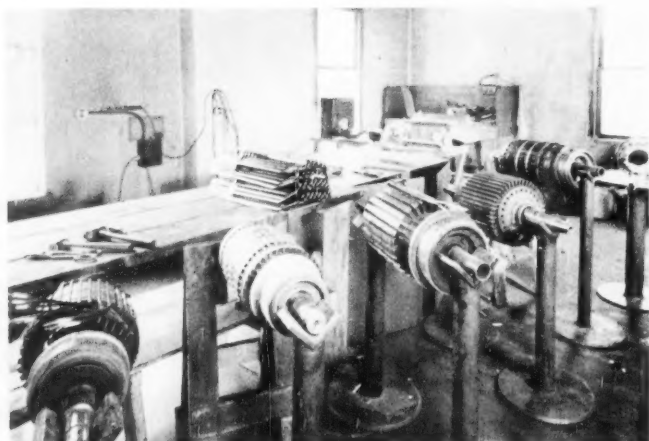
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● R. G. LE TOURNEAU, INC. CHOICE OF ENGINE OFFERED IN C ROADSTER TOUR- NAPULL

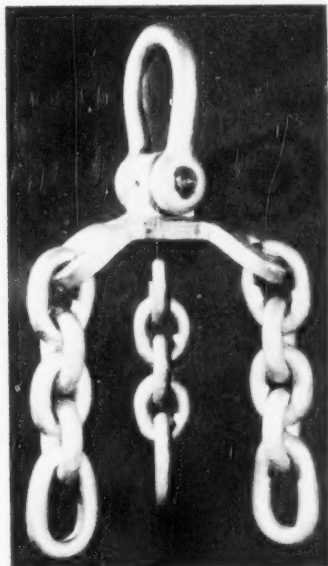
A new plan under which customers may have their choice of engine when ordering the C Roadster Tournapull is announced by R. G. LeTourneau, Inc., Peoria, Ill., manufacturer of heavy earthmoving equipment.

This tool now is available with either a General Motors 6-71, Cummins HBI 600 or Buda 6-DC-844 engine.

The C Roadster Tournapull can be used as a prime mover for a 16-ton Carryall Scraper; or a Tournarocker, LeTourneau's rear dump rock wagon; or the Tournahopper, their bottom dump hauling unit.

At the same time, the C Roadster now is built for operation at a higher top speed. It is now equipped with a heavy-duty five-speed transmission with a top road speed of over 30 miles per hour in 5th gear. This machine has the four working speeds previously available (ranging from 3.0 to 19.8 mph) plus the high return speed, which, LeTourneau points out, can be used to good advantage in cutting down cycle time on many jobs.

● WOODHOUSE CHAIN WORKS



A new magnet sling chain which combines the advantages of unusually low headroom and long service life is announced by Woodhouse Chain Works, Trenton, N. J.

The sling is so designed that its top plate keeps the three attachment chains in the proper place when fastened to the magnet. This prevents excessive wear on the end links, a common difficulty with other types of slings. The sling shackle is made with a bronze bearing and equipped with a lubrication fitting. Bow of the shackle is stilted at the bearing point to withstand abrasive wear against the crane hook.

Safe working load capacity of the sling is 50,000 lbs.

For additional data, write Woodhouse Chain Works, Trenton, N. J., or other Round Associate Chain Companies. These include The Bridgeport Chain & Mfg. Co., Bridgeport, Conn.; The Cleveland Chain & Mfg. Co., Cleveland, Ohio; Round California Chain Co., So. San Francisco and Los Angeles, Cal.; Seattle Chain & Mfg. Co., Seattle, Wash.

JEFFREY COAL PREPARATION EQUIPMENT

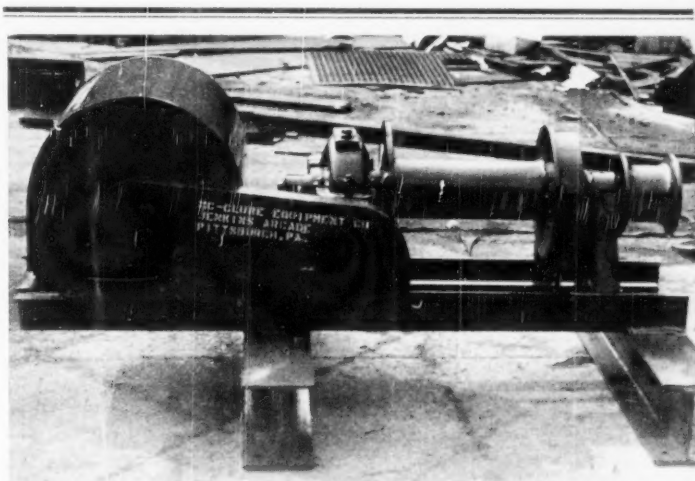


The Jeffrey Mfg. Co., Columbus, Ohio announces a new catalog No. 815. This beautiful 4 color 64 page book covers every phase of coal preparation equipment from individual units to complete plants. It is virtually a textbook on coal washing with large cut-away illustrations and many details of all types and sizes of Jeffrey Jigs for washing coal up to 700 T.P.H. Related equipment covered includes sizing, mixing, conveying, delivery to cars, trucks or barges, etc. Copy of this catalog can be had by writing the manufacturer.

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SPECIFICATIONS: Length, 7'; Width, 29½"; Height, 30½"; Weight, 2195 lbs.; Rope Capacity, 500 ft.—¾", 750 ft.—1". Channel iron frame with solid steel bottom . . . completely guarded . . . all parts readily accessible.

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TRACTORS**

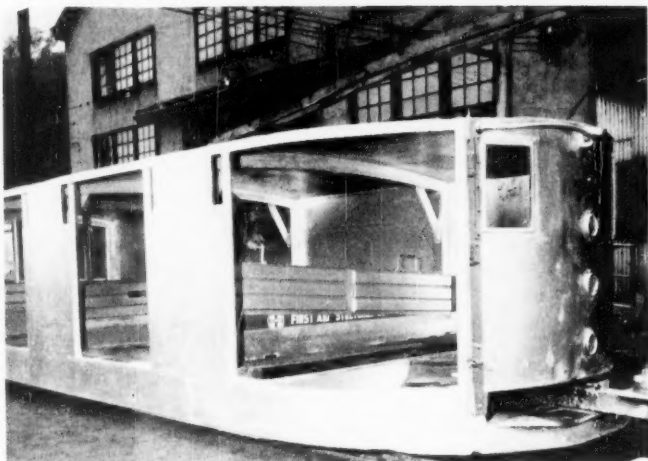
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• MINE SAFETY APPLIANCE CO.



Newly designed mantrip cars for Jones & Laughlin Steel Corporation's Vesta Mines 4 and 5 and Shannopin Mines can be quickly transformed into ambulances for emergency work. A special first aid outfit developed by Mine Safety Appliances Company is stored in each car. The steel first aid case, containing folding stretcher, splints, blankets and other equipment, is designed to resist dampness and dust. Extra-large front door of the mantrip car allows entry of a stretcher which is transported resting between the seats.

• LINK-BELT SPEEDER CORP.



Illustration shows LS-51 operating as a shovel. Insert shows operator's side of control stand and clearly illustrates compact arrangement of the 'Speed-o-Matic' hydraulic controls.

Model LS-51, the newest addition to the Link-Belt Speeder line of shovel-cranes, is equipped with the well-known Speed-o-Matic full hydraulic controls. First introduced in 1936, Speed-o-Matic controls have until now been available only on machines of 1½ to 3 yard capacity. On such ma-

chines, the hydraulic system has been thoroughly proven by years of profitable service. It provides faster operation, greater output and lower maintenance cost to owners of the LS-51 and sets a new standard of performance for machines of the ½ yard class.

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Two C. E. H. M. 830 Armor Plate Frame 48" Ga. 29" above Rail.
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 One M. H. 96 Jeffrey 4 Ton Channel Frame Locomotive.
 One M. H. 88 Jeffrey 6 Ton Channel Frame Locomotive.
 One M. H. 78 Jeffrey 10 Ton Armor Plate Frame Locomotive.

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Six Jeffrey 35 B Shortwall Machines.
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Joy Elevating Conveyor. Joy Chain Conveyor 20 H.P. Motor.
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 Belt Conveyors, 26", 30", and 48"—600' New Belting 5 ply 26".
 Fifty New End Dump 48" Ga. Low-Vein Mine Cars.
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 Four Hundred Tons 25", 40" and 50" Relaying Rail.
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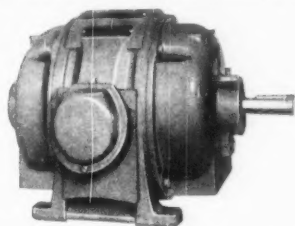
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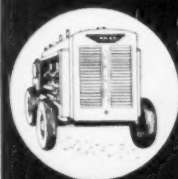
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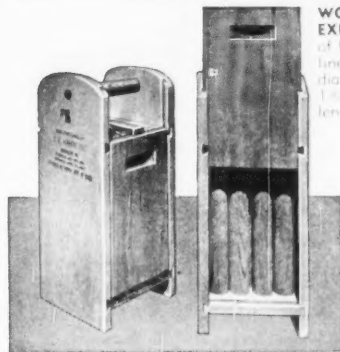
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WITH PERMANENT
PEAK
EFFICIENCY
LIFETIME
VALVES

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 KENT, OHIO

Please Say You
Saw It In
Coal Mining



**WOOD TAMPING POLES FOR TAMPING
EXPLOSIVE SHOTS:** Poles are round made
of hardwoods, lengths to 10 ft. Price per
lineal ft. 1 1/2" dia. 6c. 1 3/4" dia. 9c. 1 1/2"
dia. 10c. 1 3/4" dia. 12c. 1 1/2" dia. 14c.
1 3/4" dia. 20c. Special diameters and
lengths can be furnished.



EXPLOSIVE BOXES: Made entirely of wood having no metal parts, tongue grooved
and dovetailed construction with automatic lock using a rubber band for a spring,
treated with paraffin to make moisture resistant. Approved by the Pennsylvania
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No. 1 Powder Box	\$2.05 Each	No. 50 Powder Box	\$6.40 Each
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The above boxes are rigid and non-conductive.

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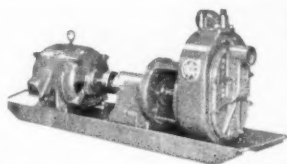
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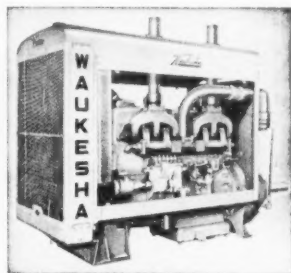
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Well prepared overburden in strip
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Our trained blast hole drilling and blasting crews
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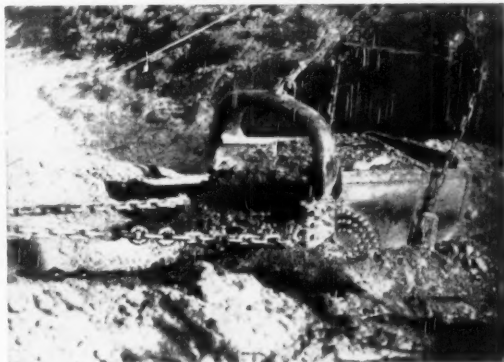
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7 250 Westinghouse 1200

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1 100 kw G.E. 125 v. 1200 rpm 220 440 v.

2 100 kw G.E. 125 v. 1200 rpm 220 440 v.

3 100 kw G.E. 125 v. 1200 rpm 220 440 v.

4 100 kw G.E. 125 v. 1200 rpm 220 440 v.

5 100 kw G.E. 125 v. 1200 rpm 220 440 v.

6 100 kw G.E. 125 v. 1200 rpm 220 440 v.

7 100 kw G.E. 125 v. 1200 rpm 220 440 v.

8 100 kw G.E. 125 v. 1200 rpm 220 440 v.

9 100 kw G.E. 125 v. 1200 rpm 220 440 v.

10 100 kw G.E. 125 v. 1200 rpm 220 440 v.

11 100 kw G.E. 125 v. 1200 rpm 220 440 v.

12 100 kw G.E. 125 v. 1200 rpm 220 440 v.

13 100 kw G.E. 125 v. 1200 rpm 220 440 v.

14 100 kw G.E. 125 v. 1200 rpm 220 440 v.

15 100 kw G.E. 125 v. 1200 rpm 220 440 v.

D.C. Generators—250 v. D.C.

No. KW Make Speed

1 250 West 1200

2 250 West 1200

3 250 West 1200

4 250 West 1200

5 250 West 1200

6 250 West 1200

7 250 West 1200

8 250 West 1200

9 250 West 1200

10 250 West 1200

11 250 West 1200

12 250 West 1200

13 250 West 1200

14 250 West 1200

15 250 West 1200

A.C. Generators—220 4000 440 220 v.

No. KW Make Speed

1 220 West 1200

2 4000 West 1200

3 440 West 1200

4 220 West 1200

5 220 West 1200

6 220 West 1200

7 220 West 1200

8 220 West 1200

9 220 West 1200

10 220 West 1200

11 220 West 1200

12 220 West 1200

13 220 West 1200

14 220 West 1200

15 220 West 1200

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Qut. H.P. H.H. Make

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Advertiser's Index COAL MINING

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Page

APEX POWDER CORPORATION 37

ARROW SUPPLY COMPANY 34

ASHLAND OIL & REFINING COMPANY 6

Agency Ryan & Brennan

BECKWITH MACHINERY COMPANY 4-5

Agency Ryan & Brennan

COAL OPERATORS CASUALTY COMPANY 32

Agency Matthews & Co.

CONNELLSVILLE MFG. & MINE SUPPLY 7

COMPANY

CUMMINS ENGINE COMPANY, INC. 11

Agency Spencer-Garrett Inc.

DALY TICKET COMPANY 36

DAVEY COMPRESSOR COMPANY 35

Agency Fitch & Patterson Inc.

DUQUESNE ELECTRIC & MFG. COMPANY 38

ENGINEERED FRICTION COMPANY 7

EUCLED ROAD MACHINERY COMPANY 14

Agency Buyness-Kent Company

FISH & COMPANY, J. T. 35

FLOOD CITY BRASS & ELECTRIC COMPANY 33

Agency H. H. Berry Bank

FOSTER COMPANY, INC. L. B. 38

FRANK M. K. 38

CANE & COMPANY S. E. 36

GREENSBURG MACHINE COMPANY 38

CREGG & COMPANY, INC. WM. D. 30

GULF OIL CORPORATION Back Cover

GULF REFINING COMPANY Back Cover

Agency Ryan & Brennan

HAMMOND COMPANY, J. V. 35

HARRIS PUMP & SUPPLY COMPANY 7-36

HIGHWAY EQUIPMENT

COMPANY Inside Back Cover

Agency Ryan & Patterson Inc.

HOFFMAN BROTHERS DRILLING COMPANY 36

INDUSTRIAL ELECTRIC COMPANY 32

JEFFREY MANUFACTURING COMPANY 9

Agency Ryan & Brennan

JOY MANUFACTURING COMPANY 16

Agency W. H. & T. W. W.

KANAWHA STEEL & EQUIPMENT COMPANY 37

KENAMETAL, INC. Inside Front Cover

Agency W. H. & T. W. W.

LEE-NORSE COMPANY 8

Agency Ryan & Brennan

McCLURE EQUIPMENT COMPANY 33

McLANAHAN-STONE CORPORATION 13

Agency Ryan & Brennan

MIDWEST STEEL CORPORATION 38

MINE SAFETY APPLIANCES COMPANY 10

Agency W. H. & T. W. W.

MOORE-FLEISHER HAULING COMPANY 36

MOSEBACH ELECTRIC & SUPPLY COMPANY

Front Cover

Agency Ryan & Patterson Inc.

MOTIVE PARTS COMPANY OF

PENNSYLVANIA 37

MEYER BROTHERS COMPANY 35

OSGOOD COMPANY 28

GENERAL EXCAVATOR COMPANY 28

Agency Ryan & Brennan

PENNSYLVANIA DRILLING COMPANY 36

PITTSBURGH KNIFE & FORCE COMPANY 36

ROBERTS & SCHAEFER COMPANY 12

Agency Ryan & Brennan

SALEM TOOL COMPANY 3-38

Agency Ryan & Brennan

SCHROEDER BROTHERS 29

SCOTTDAL MACHINE, FOUNDRY & CON

STRUCTION CO. 31

Agency Ryan & Brennan

STEEL BILT CONSTRUCTION COMPANY 15

Agency Ryan & Brennan

TRANTER MANUFACTURING COMPANY 37

WILSON & COMPANY GEORGE L. 30

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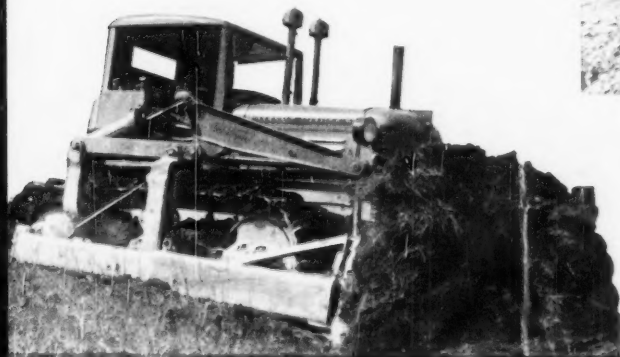
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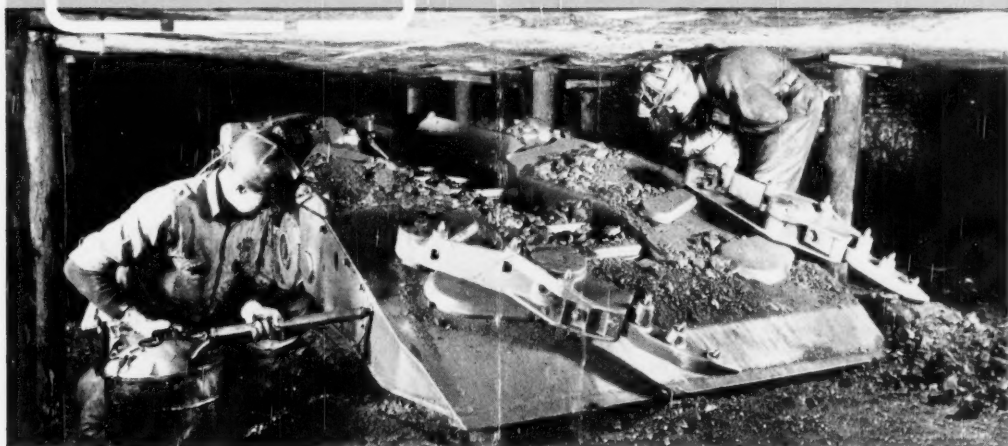
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